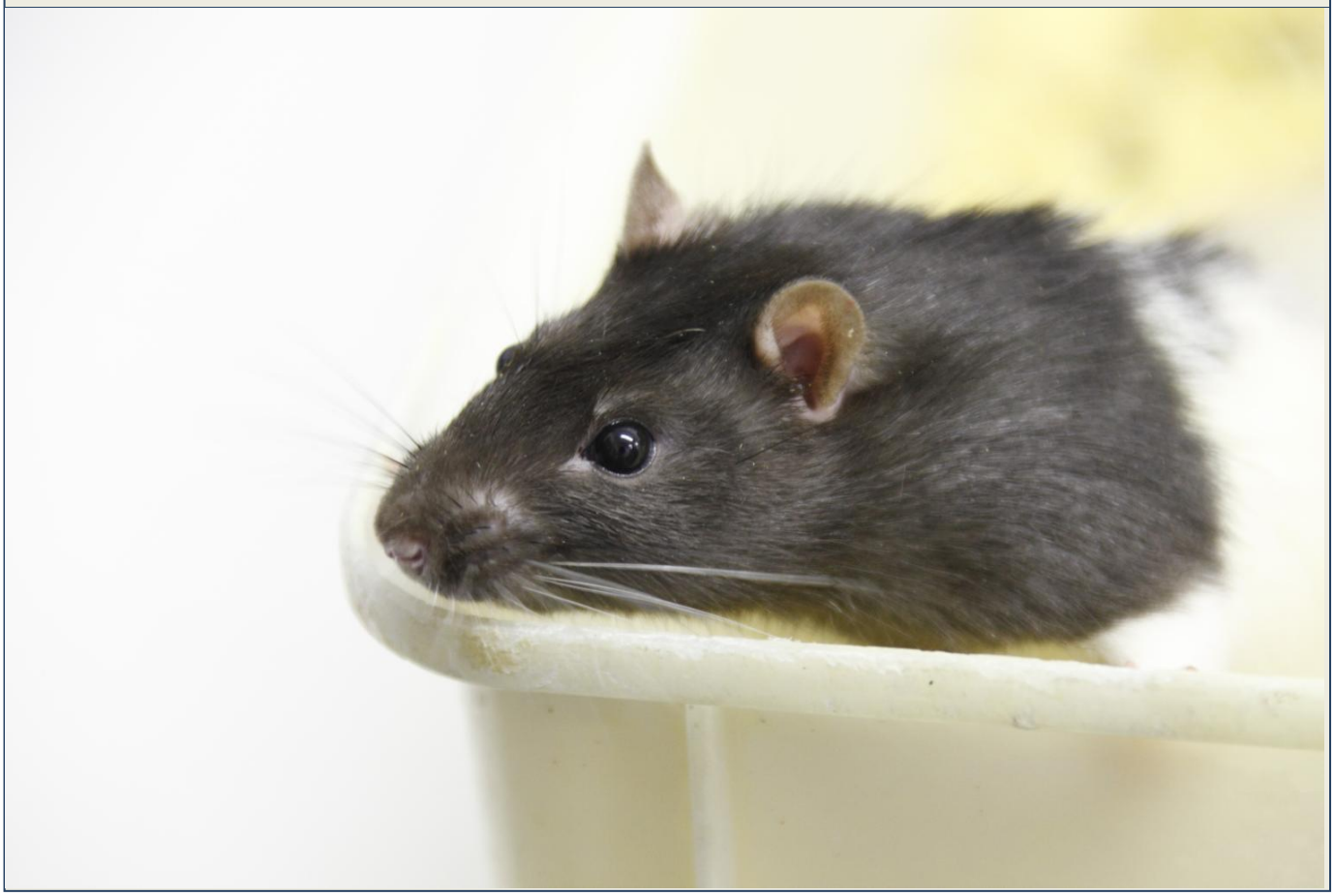
Lay Members' Forum 2018

Monday 10th December

The Royal Society, London



RSPCA Lay Members' Forum

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10:15	**Arrival and registration, with tea, coffee and biscuits**		
11:00	**Welcome and introduction**	**Maggy Jennings**	**RSPCA**
11:10	**The Animals in Science Committee (ASC) report on harm/benefit assessment** - key points and recommendations	**Gail Davies**	**ASC and University of Exeter**
11:35	**Interactive discussion session** - are AWERBs implementing recommendations from the ASC harm/benefit report; how could participants help to progress these?	**Katherine Knight**	**Animals in Science Regulation Unit, Home Office**
12.00	**Feedback, including identifying key actions**	**All**	
12:20	**On the receiving end!** - appearing before the AWERB, from the scientist's point of view	**Karin Darpel**	**The Pirbright Institute**
12:40 - 1:40	**Lunch**		
1:40	**The 9 to 5 rodent: time for change?** - animal welfare and scientific implications of using nocturnal rodents during the human working day	**Penny Hawkins**	**RSPCA**
2:00	**Assessing animal welfare** - the scientific basis for accessing the mental states of animals	**Oliver Burman**	**University of Lincoln**
2:20	**Operating in the grey zone** - experiences of a lay member at a large biomedical research institute	**Amanda Benton**	**Francis Crick Institute**
2:40	**Discussion of lay members' experiences**	**Jane Smith**	**RSPCA**
3:20	**Concluding comments**		
3:30	**Close**		

The Animals in Science Committee (ASC) report on harm/benefit assessment: key points and recommendations

Gail Davies, University of Exeter and Animals in Science Committee

The UK's Animals in Science Committee (ASC) recently completed its review of the processes of harm–benefit analysis (HBA) carried out under the UK Animals (Scientific Procedures) Act 1986 (ASPA). The 2017 ASC report concludes that HBA remains a legitimate ethical framework for evaluating the use of animals in research and makes 27 specific recommendations for improving the HBA.

ASPA requires the HBA of a programme of work to assess whether the harm that would be caused to protected animals, in terms of suffering, pain, distress, and lasting harm, can be justified by the expected outcome, taking into account ethical considerations and the expected benefit to human beings, animals, or the environment. ASPA additionally demands consideration of 'important animal welfare or ethical concerns, novel or contentious issues, or societal concerns'. Given these complex requirements, processes of HBA need regular review to operate in ways that are responsive to scientific and societal developments.

This presentation will summarise the aims of the HBA review and identify key principles underlying its recommendations. The ASC report builds on developments that understand HBA as an open-ended and iterative process, which requires ongoing communication to help deliver robust and effective ethical review. Specifically, we explore how processes of ethical review need to engage with changing understandings around harms and benefits. We review novel scientific frameworks to recognise and mitigate harms, around cumulative severity and the assessment of 'severe severity'. We also identify new mechanisms for evaluating research design and research impact, which can be used to assess and improve the likelihood of benefits.

Finally, we consider the relationship between the different kinds of HBA carried out, suggesting the AWERB should be recognised as a lynchpin within the HBA process, as it brings together a wide variety of relevant perspectives and operates *within* the establishment, enabling it to take account of *local* expertise and knowledge that might impact on the HBA.

Further reading:

- **Davies GF, Golledge H, Hawkins P, Rowland A, Smith J, Wolfensohn S** (2017). *Review of harm-benefit analysis in the use of animals in research.* Animals in Science Committee, London, Home Office. 87 pages. **assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/675002/Review_of_harm_benefit_analysis_in_use_of_animals_18Jan18.pdf**
- **Davies GF** (2018). Harm-Benefit Analysis: Opportunities for enhancing ethical review in animal research. *Lab Animal.* 47, 57–58. **nature.com/articles/s41684-018-0002-2** (free to read at **ore.exeter.ac.uk/repository/handle/10871/30830**)

Interactive discussion: are AWERBs implementing recommendations from the ASC harm/benefit report; how could participants help to progress these?

Katherine Knight, Animals in Science Regulation Unit (ASRU), Home Office

This is an interactive session for you to explore the recommendations of the ASC report into harm-benefit assessment and what this means to you as a lay member and to your AWERB as a whole.

The following are some guide questions on your AWERB's current processes and how these could be improved in the future:

Incorporating Ethical and Societal Concerns

- How embedded is ethical debate within your AWERB's consideration of project licence applications?
- How does your AWERB keep up to date with changing societal concerns?
- Does the structure of your AWERB embrace diverse views and reflect societal attitudes? How could this be further improved?

Evaluating and realising benefits:

- What are your current approach to research integrity and impact?
- Are there other aspects that increase the likelihood of the scientific benefits being realised?

Assessing harms:

- Are there new techniques or frameworks you could use to recognise and mitigate harms to animals?
- Do you adequately recognise cumulative suffering both in the prospective severity categorisation and in any retrospective reviews and assessments?
- What welfare outcomes have been achieved from your reviews of harms during the project lifetime? How can you improve the outcomes in the future?

Strategies to minimise severe suffering:

- Does your AWERB have a plan to decrease severe suffering at your establishment? If you don't what are the blockers to this?
- What approach is your plan based on? If you were to give advice to others on decreasing severe suffering, what would it be?

AWERB induction, ASC Hub Network and Knowledge Hub

- Do you have sufficient training and support in your AWERBs to enable you to feel confident to address these themes?
- Is your AWERB actively engaged in the Hub network?
- Could the use of the Hubs and Knowledge network be a way of gaining information to support you when deciding to support projects locally?

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Action points:

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On the receiving end! Appearing before the AWERB from the scientist's point of view.

Karin Darpel, The Pirbright Institute

Most scientists do not take the decision to use animals in research lightly and are conscious of the ethical implications of their work. The resolution to use animals as part of research is driven by the ultimate belief in the overall value and importance of the work. The rigour of the project licence application process provides the ideal framework to truly consider the harm-benefit balance and justify – initially to ourselves and then to others – why, when and how to use animals.

Nonetheless, this application process can be daunting – especially when appearing in front of the AWERB to assess the draft application. The language around the scientist attending the local AWERB sometimes speaks of "holding the scientist to account" or "invited to defend your licence application", creating the impression of confrontation and opposite sides.

However, a well-designed AWERB, which truly promotes dialogue, can have an amazing impact not only on improving animal welfare but ultimately also leading to better science. On the contrary, some AWERB experiences have left scientists defeated and wondering "Am I a bad person?" or "Am I completely wrong about my research?" Yes – sometimes the AWERB has to ensure that the motivation and enthusiasm for science does not blind the researcher, but it should also provide the scientist with the opportunity to outline and discuss their work. Scientists, on the other hand, may realise that the process of engaging with AWERB will greatly improve their ability to communicate the benefit and impact of their research to a diverse audience – an invaluable skill through all walks of science.

This presentation will explore more than 10 years of project licence applications across multiple AWERBs at different Institutions to share some of those experiences – inspiring or challenging – which led to lasting impressions and impact, and also to improved animal welfare and better science.

The 9 to 5 rodent: time for change? Animal welfare and scientific implications of using nocturnal rodents during the human working day.

Penny Hawkins[1] and Huw Golledge[2]

[1]Research Animals Department, RSPCA

[2]UFAW (Universities Federation for Animal Welfare, UK (ufaw.org.uk)

Rodents, particularly mice and rats, are the most commonly used laboratory animals. It is common practice to carry out scientific procedures on rats and mice under bright, artificial lighting during the human working day – but this is the inactive period for these nocturnal species. This presents both scientific and animal welfare issues, because both time of day and quality of light can have significant effects on rodent behaviour and physiology.

For example, behavioural tests done during the human working day, in full light, may produce abnormal results because the animal's mental processing is impaired, or they are not motivated to perform the task, or there are physiological responses to the stress of being disturbed during the resting period. This is an animal welfare issue, because procedures done when animals should be asleep may be experienced as more stressful, and sleep deprivation may cause stress, anxiety or depression. It is also an ethical issue, because the effects on data quality could make the results invalid, wasting animal's lives.

It is therefore important to consider the potential effects of the time of day and lighting conditions, on both the welfare of mice and rats and on data quality, when routine husbandry or scientific procedures are performed. Although the effects of using mice and rats during their subjective 'night-time' are not yet fully understood, it is good practice to give animals the benefit of the doubt and aim to conduct both husbandry and experimental procedures at times when the animals would be active, and under naturalistic lighting conditions.

Approaches to addressing this include time-shifting mice and rats, to enable some deep sleep before the start of the human day. Although some changes to husbandry and lighting protocols would require resources and time to implement, an immediately achievable change in practice to help address issues with scientific validity would be for authors to include details of lighting regimes in publications. This talk will suggest some ways in which you, as AWERB members, can raise the issue and (I hope) stimulate some positive actions as a result.

Reference:

- **Hawkins P & Golledge HDR** (2018) The 9 to 5 Rodent – Time for Change? Scientific and animal welfare implications of circadian and light effects on laboratory mice and rats. *Journal of Neuroscience Methods* 300: 20-25 . **doi.org/10.1016/j.jneumeth.2017.05.014**

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Assessing animal welfare: the scientific basis for accessing the mental states of animals

Oliver Burman, University of Lincoln

Whether we are deciding how best to house and manage captive animals, refining experimental procedures to improve animal welfare, or trying to ensure that laboratory animals are suitably effective 'models' for research, we need to be able to reliably assess animal welfare. There is increasing acceptance that accessing the mental states of animals is critical to achieving this goal.

As lay members, you are often the AWERB participants who ask the vitally important questions relating to how animals might be feeling, and how we can assess the impact of husbandry and procedures (and refinements) on animal welfare. These questions are always worth asking, and you should feel confident in raising these issues, because there is a sound scientific basis for inferring animal's mental states.

In this presentation I will define mental states in (non-human) animals and describe the behavioural, cognitive and physiological components that can be measured in our attempts to access these states. Using examples from the scientific literature, I will outline the way in which these indicators can be studied, how they are interpreted, and discuss the relative advantages and disadvantages of each.

Further reading:

- A guide to defining and implementing protocols for the welfare assessment of laboratory animals: Eleventh report of the BVAAWF/FRAME/RSPCA/UFAW Joint Working Group on Refinement. January 2011. Laboratory Animals 45(1):1-13 (free download at **doi.org/10.1258/la.2010.010031**)
- Cognitive bias as an indicator of animal emotion and welfare: Emerging evidence and underlying mechanisms. May 2009. Applied Animal Behaviour Science 118(3):161-181
- Sensitivity to reward loss as an indicator of animal affect and welfare. September 2008. Biology letters 4(4):330-3

Operating in the grey zone: experiences of a lay member at a large biomedical research institute

Amanda Benton, Francis Crick Institute

I have been a lay and independent AWERB member for eight years; two years with the Crick Institute and before that with Cancer Research UK. My background is in law and financial services regulation. I was previously Compliance Director with an internet bank and spent time running an anti-fraud network based at the Bank of England. I believe there are transferable skills of analysis and challenge from that regulatory regime to animal research and testing.

As a long-term vegetarian and coming from a family which has, like so many others, suffered from cancer, I have very personal interests in the progress of science and medicine in the fight against this and other diseases, and in the need to balance research against the ethical considerations associated with animal use.

I try to bring this combination of skills and experiences to my work as a lay member. I also enjoy the challenge of operating in a scientific environment where my technical knowledge is very, very limited. There is a lot to learn!

What I am trying to convey is that it is not easy being a lay member of an AWERB. It is not meant to be. The decisions we are involved in making affect the welfare of many animals and can also affect the careers of scientists and researchers. No one relishes the idea of animal experiments - they can be viewed as a 'necessary evil'.

The role of the lay member is to focus initially on the difficult ethical issues in the proposed work and then to help ensure that the 3Rs are applied with vigour and imagination, so that within the requirements of scientific necessity as few animals as possible, suffer as little as possible, to achieve the necessary objective.

It is interesting and challenging for the lay member but never easy.

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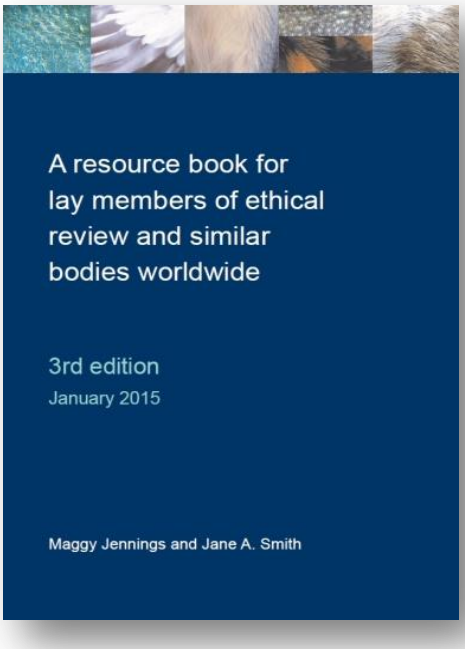
2019 will mark the 20th anniversary of the first RSPCA Lay Members' Forum! If you have any ideas for topics, discussions or activities you would like us to include in our anniversary meeting, please let us know at research.animals@rspca.org.uk

RESOURCES

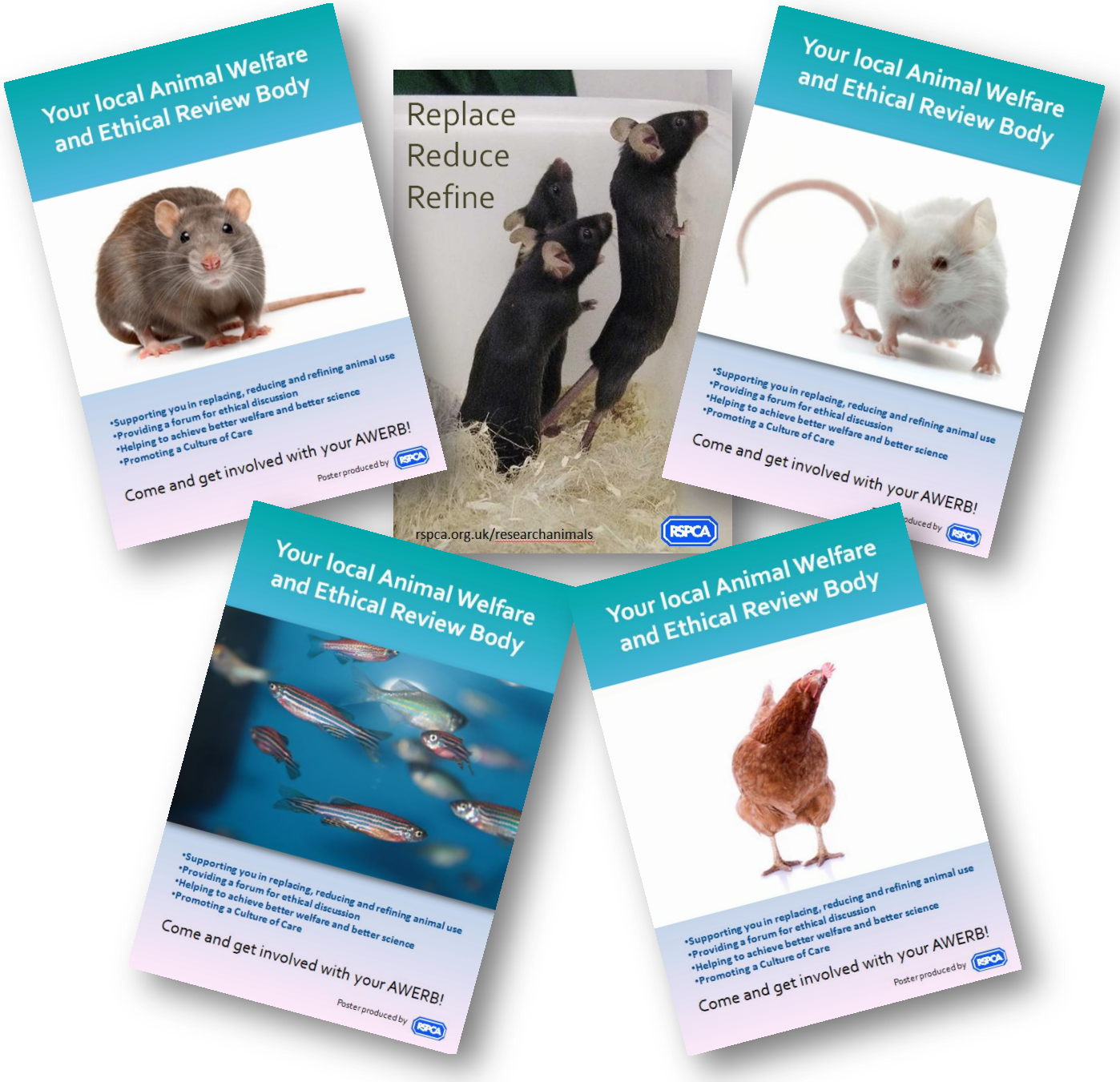
The RSPCA/LASA Guiding Principles on Good Practice for Animal Welfare and Ethical Review Bodies, 3rd edition provides a brief, clear overview of common AWERB tasks and good practice for meeting these: tinyurl.com/RSPCA-LASA-AWERB



The RSPCA Lay Members' Resource Book, 3rd edition provides guidance on how to participate effectively in the AWERB, including making ethical judgements (NB although the title refers to lay members, the content is relevant to all member categories): tinyurl.com/RSPCALMH

This new booklet provides guidance, ideas and examples to help AWERBs fulfil their forum for discussion function. If you would like a hard copy please email: research.animals@rspca.org.uk or an online page turner/PDF is available at: view.pagetiger.com/AWERB/AWERB

AWERB AND THREE RS POSTERS



Please contact research.animals@rspca.org.uk
if you would like one or more posters, remembering to state which one(s)

Further Reading

The second AWERB-UK meeting, for all AWERB members - including scientists, animal technologists, lab animal vets, AWERB chairs and lay members - was jointly convened by the RSPCA, IAT, LASA and LAVA and held in June 2017.

The meeting summary is available at: tinyurl.com/AWERB-UK2017

Please note that opinions expressed by speakers do not necessarily reflect the views of the RSPCA, staff, members or associates